

PLAYGROUND INJURY

Play is an essential component of healthy development in children, and playgrounds provide an opportunity for children to develop motor, cognitive, perceptual and social skills. Unfortunately, playgrounds are often the sites of unintentional injuries. The leading cause of playground equipment-related fatalities is strangulation, and the majority of these deaths occur on home playgrounds. Nonfatal playground equipment-related injuries, on the other hand, are most often due to falls. The majority of these nonfatal injuries take place on public playgrounds, including school, childcare and park playgrounds. In a 2000 survey, U.S. playgrounds received an overall grade of C when rated on the presence of physical hazards and behavioral elements, including supervision and age-appropriate design.

Adults are responsible for creating play environments that are challenging for children but also reasonably safe. Utilizing age-appropriate equipment, following a regular maintenance schedule, limiting equipment height and maintaining adequate surfacing, combined with adult supervision, can greatly reduce the incidence and severity of playground injuries.

PLAYGROUND DEATHS AND INJURIES

- Since 1990, at least 147 children have died from playground equipment-related injuries. Nearly 70 percent of these deaths occurred on home playgrounds.
- In 2002, more than 215,500 children ages 14 and under were treated in hospital emergency rooms for playground equipment-related injuries; children ages 5 to 14 accounted for nearly 75 percent of these injuries. The public playground equipment-related injury rate among children ages 5 and under has doubled since 1980.

WHEN AND WHERE PLAYGROUND DEATHS AND INJURIES OCCUR

- It is estimated that one-third of playground equipment-related deaths and 75 percent of playground equipment-related injuries occur on public playgrounds.
- Playground injuries are the leading cause of injury to children in childcare and to children ages 5 to 14 in schools.
- Lack of supervision is associated with 40 percent of playground injuries. A recent study found that children play without adult supervision more often on school playgrounds (32 percent of the time) than playgrounds in parks (22 percent) or childcare centers (5 percent).
- Strangulation resulting from entanglement and entrapment is the primary cause of playground equipment-related fatalities, accounting for nearly 56 percent of the deaths. Falls to the surface are responsible for an additional 20 percent of the deaths.
- Approximately 70 percent of playground equipment-related injuries involve falls to the surface, and 10 percent involve falls onto equipment.
- Falls are the most common mode of playground injury and account for approximately 80 percent of all playground equipment-related injuries. Head injuries are involved in 75 percent of all fall-related deaths associated with playground equipment.
- Nearly 40 percent of playground injuries occur during the months of May, June and September.
- The majority (53 percent) of injuries that occur on public playgrounds involve climbing equipment, while the majority (67 percent) of injuries that occur on home playgrounds involve swings.

WHO IS AT RISK

- Female children have a slightly higher risk of sustaining playground-related injuries than males.
- Children ages 5 to 9 account for more than half of all playground-related injuries.
- Children ages 4 and under are more likely to suffer injuries to the face and head, while children ages 5 to 14 are more likely to suffer injuries to the arm and hand.
- A young child is at increased risk of injury when playing on equipment designed for older children. Only 42 percent of U.S. playgrounds have separate play areas for children ages 2 to 5 and children ages 5 to 12, and only 9 percent have signs indicating the ageappropriateness of equipment.
- The risk of injury is four times greater if a child falls from playground equipment that is more than 1.5 meters (approximately 5 feet) high than from equipment that is less than 1.5 meters high.
- The risk of injury in a fall onto a non-impact-absorbing surface such as asphalt or concrete is more than twice that of falling onto an impact-absorbing surface. It is estimated that only 9 percent of home playgrounds have appropriate impact-absorbing surfacing around stationary equipment.

PLAYGROUND INJURY PREVENTION EFFECTIVENESS

- Protective surfacing under and around playground equipment can reduce the severity of and even prevent playground fall-related injuries. According to a 2002 national survey, 75 percent of public playgrounds lack adequate protective surfacing.
- A recent study found that the rate of playground-related injuries at North Carolina childcare centers dropped 22 percent after a law was passed requiring new playground equipment and surfacing in childcare facilities to conform to U.S. Consumer Product Safety Commission guidelines.

PLAYGROUND LAWS AND REGULATIONS

- Playground equipment guidelines and standards have been developed by the U.S. Consumer Product Safety Commission and the American Society for Testing and Materials. At least seven states have enacted some form of playground safety legislation.
- The CPSC has issued voluntary guidelines for drawstrings on children's clothing to prevent children from strangling or getting entangled in the neck and waist drawstrings of outerwear garments, such as jackets and sweatshirts. Children are at risk from strangulation when drawstrings on clothing become entangled in playground equipment.

HEALTH CARE COSTS AND SAVINGS

- The total annual cost of playground equipment-related injuries among children ages 14 and under was estimated to be \$1 billion in 1998.

PREVENTION TIPS

- Avoid asphalt, concrete, grass and soil surfaces under playground equipment. Acceptable loose-fill materials include shredded rubber, hardwood fiber mulch or chips, and fine sand. Surfacing should be maintained at a depth of 12 inches and should extend a minimum of 6 feet in all directions around stationary equipment. Depending on the height of the equipment, surfacing may need to extend farther than 6 feet. Rubber mats, synthetic turf and other artificial materials are also safe surfaces and require less maintenance.
- Ensure that a comprehensive inspection of all playgrounds is conducted by qualified personnel. Abide by daily, monthly and annual playground maintenance schedules. Ensure that schools and childcare centers have age-appropriate, well-maintained playground equipment and that trained supervisors are present at all times when children are on the playground. Report any playground safety hazards to the organization responsible for the site (e.g., school, park authority, city council).
- Always supervise children when using playground equipment. Maintain visual and auditory contact. Prevent unsafe behaviors like pushing, shoving, crowding and inappropriate use of equipment. Ensure that children use age-appropriate playground equipment. Maintain separate play areas for children under age 5.
- Remove hood and neck drawstrings from all children's outerwear. Never allow children to wear helmets, necklaces, purses, scarves or clothing with drawstrings while on playgrounds.

